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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,813	12/30/2003	Juha Marila	915-008.017	9367

4955 7590 03/28/2008

WARE FRESSOLA VAN DER SLUYS & ADOLPHSON, LLP
BRADFORD GREEN, BUILDING 5
755 MAIN STREET, P O BOX 224
MONROE, CT 06468

EXAMINER	
AUGUSTINE, NICHOLAS	
ART UNIT	PAPER NUMBER
2179	

MAIL DATE	DELIVERY MODE
03/28/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/749,813	MARILA ET AL.	
	Examiner	Art Unit	
	NICHOLAS AUGUSTINE	2179	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the following communications: Amendment filed: 12/19/2007. This action is made **Final**.

A. Claims 1-29 remain pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation 0f35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-5, 7, 9-16, 18, 20-24, 26 and 28-29 are rejected under 35 U.S.C. 102(e) as being unpatentable over Dostie et al. (US Pub 2004/0021691) in view of Buxton et al. (US Patent 6,094,197), hereinafter ("Dostie", "Buxton").

As to independent claims 1 and 12, Dostie teaches a device (e.g. method, device, etc), for inputting, comprising: a display (fig. 1); and a memory (fig. 1) comprising a first set of characters, said first set of characters comprising at least two characters (fig. 3, highlighted characters "TYSD"; par [0080], lines 12-21), and a second set of characters, said second set of characters comprising at least two characters (fig. 3, the remaining characters), wherein the characters in the first set of characters are statistically more likely to be selected in successive order than the characters in the second set of characters (par [0064], lines 1-5; par [0085]).
Dostie does not teach the display is adapted to display, for selection of which character to input, the first set of characters.
However, in the same field of virtual keyboard input, Buxton teaches the display is adapted to display the first set of characters, for selection of which character to input, (figs 7-10, 15-17; col. 4, lines 34-47; col. 5, lines 30-40), and characters, which are not likely to be selected are not display (figs 7-10, 15-17) to save display space (col. 2, lines 42-52)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Dostie by having the display is adapted to display the first set of characters, for selection of which character to input as taught by Buxton in order to provide a way to select characters in an efficient manor and optimize the screen display (Buxton: col. 2, lines 12-20).

As to independent claim 21 (Current Amended), Dostie teaches a computer program product comprising program code stored in a memory (fig. 1, label 16, par [0067], lines 6-20) for generating a virtual keyboard on a display (par [0064], lines 15-24), when said program code is executed by a processor (fig. 1, labels 12, 26; par [0069], lines 1-7) the program code comprising: for defining a first set of characters comprising at least two characters (fig. 3, highlighted characters "TYSD"; par [0080], lines 12-21); for defining a second set of characters comprising at least two characters (fig. 3, the remaining characters), wherein the characters of the first set of characters are statistically more likely to be selected in successive order than the characters of the second set of characters (par [0064], lines 1-5; par [0085]).
Dostie does not teach the display is adapted to display, for selection of which character to input, the first set of characters.
However, in the same field of virtual! keyboard input, Buxton teaches the display is adapted to display the first set of characters, for selection of which character to input, (figs 7-10, 15-17; col. 4, lines 34-47; col. 5, lines 30-40), and characters, which are not

likely to be selected are not display (figs 7-10, 15-17) to save display space (col. 2, lines 42-52)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Dostie by having the display is adapted to display the first set of characters, for selection of which character to input as taught by Buxton in order to provide a way to select characters in an efficient manor and optimize the screen display (Buxton: col. 2, lines 12-20).

As to dependent claims 2, 13 and 22, In light of Dostie and Buxton, the device is adapted to select any desired one of the displayed characters if said desired character exists in the displayed first set of characters (Dostie: fig. 3; Buxton: figs 7-10, 15-17).

As to dependent claims 3, 14 and 23, In light of Dostie and Buxton, it appears that if the desired character is not in the displayed first set, the system would display more of the remaining character for selection. Even if it s not, such implementation would have been obvious to one of skill in the art. Motivation of the implementation is for providing ;he remaining characters for appropriate selection.

As to dependent claims 4, 15 and 24, In light of the rejection set forth in claim 3, user may select any desired one of the displayed characters if said desired character exists in the displayed second set of characters.

As to dependent claim 5, The combined references fail to teach the switch, however, in light of the combined Dostie and Buxton, it would have been obvious to one of skill in the art to implement a switching means for switching from the first set of character to the second set of character to in search for the desired character.

As to dependent claims 7, 18 and 26, Dostie does not teach the device is adapted to display the characters in the first set Of characters on the display in QWERTY-format. However, Buxton teaches the device is adapted to display the characters in the first set of characters on the display in QWERTY-format (figs 7-10; col. 4, lines 34-47; col. 5, lines 30-40, that the keyboards displayed in figures 7-10 are clearly the QWERTY format as seen in row 2 of the keyboard as it spells out "qwerty" to the right of the tab key).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Dostie by the device is adapted to display the characters in the first set of characters on the display in QWERTY-format as taught by Buxton in order to provide a way to select characters in an efficient and expedient manor based on a standardized keyboard layout (Buxton: col. 2, lines 12-20).

As to dependent claim 9, Dostie further teaches the display is a touch-sensitive display (par [0079], lines 1-6).

As to dependent claims 10 and 16, Dostie further teaches the first set of characters and the second set of characters are based on a specific language used for inputting information (par [0080]).

As to dependent claims 11, 20 and 28, Dostie further teaches the device is embodied as a mobile terminal for a mobile telecommunications system (par [0073], lines 13-20).
As to independent claim 29 (New), Dostie teaches a device for inputting information (fig. 1), comprising; means for displaying characters (fig. 1); and means for storing a first set of characters (fig. 1), said first set of characters comprising at least two characters (fig. 3, highlighted characters "TYSD"; par [0080], lines 12-21), and a second set of characters, said second set of characters comprising at least two characters (fig. 3, the remaining characters), wherein the characters in the first set of characters are statistically more likely to be selected in successive order than the characters in the second set of characters (par [0064], lines 1-5; par [0085]).
Dostie does not teach the display is adapted to display, for selection of which character to input, the first set of characters.
However, in the same field of virtual keyboard input, Buxton teaches the display is adapted to display the first set of characters, for selection of which character to input, (figs 7-10, 15-17; col. 4, lines 34-47; col. 5, lines 30-40), and characters, which are not likely to be selected are not display (figs 7-10, 15-17) to save display space (col. 2, lines 42-52).
Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Dostie by having the display is adapted to display the first set of characters, for selection of which character to input as taught by Buxton in order to provide a way to select characters in an efficient manor and optimize the screen display (Buxton: col. 2, lines 12-20).

4. Claims 6, 8, 17, 19, 25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dostie in view of Buxton and further in view of Pu et al. (US Patent 7,152,213), hereinafter "Pu".

As claim to dependents 6, 17 and 25, Dostie and Buxton do not teach the device is adapted to cluster, on the display for selection, characters within the first set of characters, so that characters that are statistically more likely to be selected in successive order appear closer to each other than characters that are statistically less likely to be selected in successive order.

However, in the same field of virtual keyboard input (Pu: col. 10, lines 55-57), Pu teaches the device is adapted to cluster, on the display for selection, characters within the first set of characters, so that characters that are statistically more likely to be selected in successive order appear closer to each other than characters that are statistically less likely to be selected in successive order (col. 4, lines 29-38; col. 2, lines 50-63; fig. 7A- 7C; col. 9, lines 29-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Dostie and Buxton by the device is adapted to cluster, on

the display for selection, characters within the first set of characters, so that characters that are statistically more likely to be selected in successive order appear closer to each other than characters that are statistically less likely to be selected in successive order as taught by Pu in order to provide an improved user interface used to input data without the use of a standard keyboard were the data that is entered is selected from a predefined list or group determining by the relative frequency of each valid selection in the predefined list and presenting those valid selections with the highest frequency in a position that minimizes the number keystrokes required for data entry (Pu: col. 2, lines 46-57).

As to dependent claims 8, 19 and 27, Dostie and Buxton do not teach the device is adapted to display the characters in the first set of characters on the display in alphabetical order. However, in the same field of virtual keyboard input, Pu teaches the device is adapted to display the characters in the first set of characters on the display in alphabetical order (col. 4, lines 29-38; col. 2, lines 50-63; fig. 7A-7C; col. 9, lines 29-40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Dostie and Buxton by having the device is adapted to display the characters in the first set of characters on the display in alphabetical order as taught by Pu in order to provide an improved user interface used to input data without the use of a standard keyboard were the data that is entered is selected from a predefined list that is alphabetical determining by the relative frequency of each valid selection in the predefined list and presenting those valid selections with the highest

frequency in a position that minimizes the number keystrokes required for data entry (Pu: col. 2, lines 46-57).

(Note:) **It is noted that any citation to specific, pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. In re Heck, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting In re Lemelson, 397 F.2d 1006,1009, 158 USPQ 275, 277 (CCPA 1968)).**

Response to Arguments

Applicant's arguments filed 12/19/2007 have been fully considered but they are not persuasive.

After careful review of the amended claims (given the broadest interpretation) and the remarks provided by the Applicant along with the cited reference(s) the Examiner does not agree with the Applicant for at least the reasons provided below:

A1. Applicant argues that there is no disclosure or suggestion that there is a first and second character set, wherein each character set comprising at least two characters and wherein the characters of the first character set ate statistically more likely to be selected in successive order".

R1. Examiner does not agree. Examiner points out that the Applicant is arguing what is not partially claimed. Claim language does not claim to a "character set" but a "set of characters". A character set is known in the art, which is also called character encoding (ASCII, EBCDIC, etc), wherein a set of characters would be a string of characters, collection of characters or the like. Dostie provides to the user various set

of characters which are described as candidate choices to the user to aid in typing (figure 3; “build”, “built”, “business”, etc). Also Dostie does teach wherein in the system is cable of having multiple character sets such as ASCII, EBCDIC, etc. In paragraph 80-81 is described is a keyboard layout being able to take various forms as what is commonly known in the art to display four character sets (English alphabet, ASCII Symbols, European Symbols and numerals), thus Dostie does teach providing a first and second character set for user input (figure 3; depicted are four character sets, the English alphabet is shown and is expected statistically to be the most likely next character input where also there are links to change the layout of the keyboard to other character sets “123…” “SYM” and “AU”). Thus Dostie teaches that there is a first and second character set, wherein each character set comprising at least two characters and wherein the characters of the first character set ate statistically more likely to be selected in successive order; and providing two distinct sets of characters (user can change the primary keyboard layout to another character set by selecting "123..", "SYM" or “AU” from figure 3; thus providing distinctive character sets.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Inquires

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas Augustine whose telephone number is 571-270-1056. The examiner can normally be reached on Monday - Friday: 7:30- 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on 571-272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nicholas Augustine/
Examiner, Art Unit 2179
March 22, 2008

/Ba Huynh/
Primary Examiner, Art Unit 2179